

Minera Candelaria, Chile

# **SONARtrac<sup>®</sup>**

## **Flow Monitoring Systems**

**Non Intrusive - Maintenance Free**  
**Not Ultrasonic**

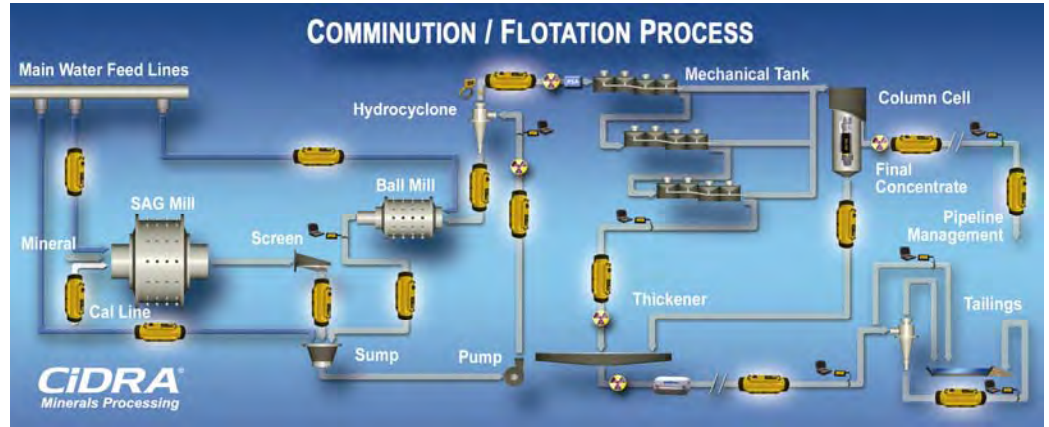


Well suited for slurries, lined pipes, pipes with scale, magnetic ores, in grinding, smelting, leaching, high pressure pipelines, flotation lines, hydrocyclone feed and discharge lines

**CiDRA<sup>®</sup>**  
Minerals Processing

[www.cidra.com](http://www.cidra.com)  
203.265.0035

# OPTIMIZE YOUR BENEFICIATION PROCESS



## Unique Process Monitoring Instrumentation and Services

– for concentrators, pipelines, leaching facilities, and tailings management

Products	Services
<p>Flowmeter – Non-Invasive for Slurries and Liquids                      Entrained Air Meter for Pipes – Density Correction / Cavitation                      Gas Holdup Meter for Flotation Tanks/Columns                      Acoustic Monitoring System – Pumps, Valves, Leaks                      Pipeline Batch Tracking System</p>	<p>Flow Measurement Service                      Pipe Wear Monitoring                      Pipeline Sanding Detection – Velocity Profile                      Flow and Entrained Air Surveys                      Meter Check Service                      Mass Balance                      Process Optimization                      Cyclone Oversized Rock Detection</p>

<b>Measurement Challenges</b>	<b>SONARtrac Advantages</b>
Install a flowmeter without stopping process	Installs on the outside of the pipe
Labor and safety requirements for installation of large flowmeters	Lightweight, single or two person installation without need for cranes
Flowmeter has to measure both liquids and slurries	Same instrument measures gases, clean liquids, slurries, and pastes
Corrosion and erosion on flowmeters impacts repeatability, reliability and results in downtime	No wetted parts. Installs on the outside of the pipe with no gels or couplants (not an ultrasonic meter)
Scale buildup on traditional flowmeters such as magmeters leads to increased maintenance costs and measurement downtime	A unique ability to continuously provide accurate flow velocity measurements with any pipe liner and with scale buildup
Magnetic material in ore such as magnetite and pyrrhotite, adversely impacts the accuracy of even magnetic-compensated magmeters	The SONARtrac system does not use a magnetic field thus it is not affected by the magnetic properties of the slurry. It is the only technology able to provide a reliable flow measurement completely unaffected by the presence of magnetite
A traditional flowmeter can measure only flow	SONARtrac technology is a platform which has been expanded to measure the percentage of air mixed in with a slurry, to differentiate between slurry and water in pipeline batch operations, and to acoustically monitor valves, pumps, and pipes